



Digidesign Reference Monitor Series **RM1 and RM2**

Professional, bi-amplified monitoring system

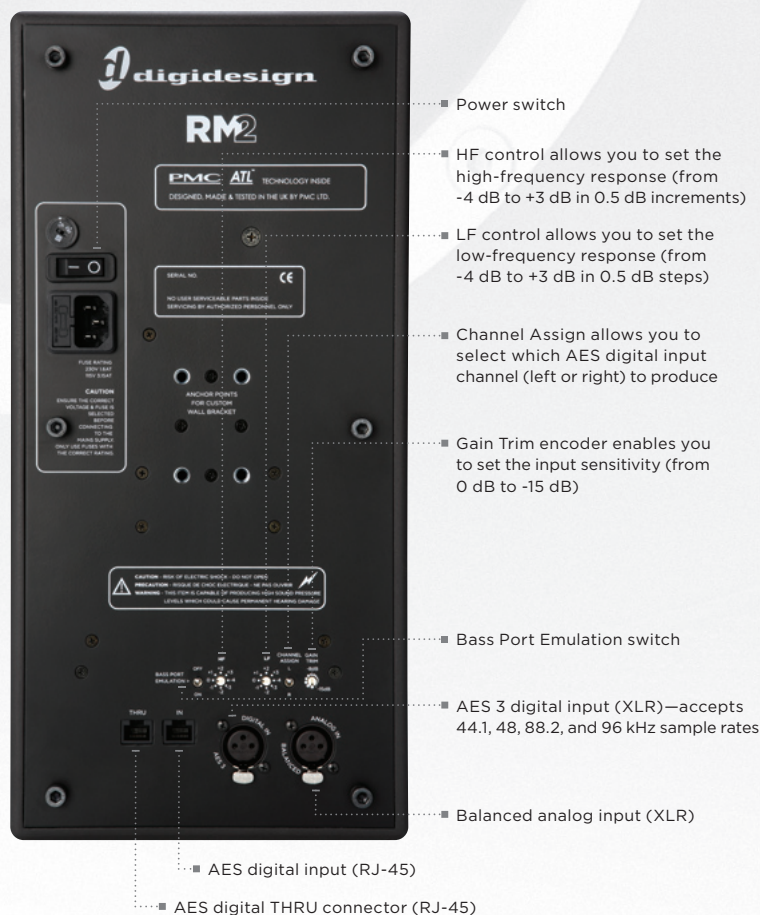
ENGINEERED WITH
PMC
ATL™



RM1 and RM2 Features

- Professional, bi-amplified monitoring system
- Analog and digital inputs (up to 24-bit/96 kHz)
- Audiophile-grade, analog-controlled Class D amplifiers with high-quality linear power supply units
- Advanced Transmission Line (ATL™) technology provides high SPL and superior bass extension
- Unrivaled tonal accuracy, clarity, and dynamic range with exceptionally low distortion
- Powerful onboard DSP engine provides:
 - Extremely accurate digital crossover for pristine imaging
 - Bass Port Emulation mode to emulate tonal characteristics of ported bass reflex speakers
 - Precise gain trim, low- and high-frequency adjustment, and speaker placement settings
- Low jitter analog-to-digital converter (ADC) with low-noise clock oscillator
- Sound dispersion design maintains accurate frequency response even in off-axis listening positions

RM1 and RM2 provide various inputs and controls on the back—here's a look at these on RM2 (RM1 is identical).



High-Definition Sound—Revealed

Digidesign revolutionized the professional recording industry with its Pro Tools® digital audio workstation. And for over 20 years, Digidesign has developed groundbreaking technologies and tools that have energized audio professionals and garnered hundreds of industry accolades, including Grammy® and Oscar® awards for technical achievement.

But above all, Digidesign's goal is to continuously innovate and deliver products that sustain the highest audio quality possible. Its recording and mixing systems boast unrivalled sound quality with 24-bit/192 kHz audio resolution. Its Pro Tools architecture features a true, fixed-point, 48-bit mixer that yields nearly 300 dB of dynamic range. And many of its high-quality plug-ins provide double-precision processing for the ultimate in dynamic range and headroom.

To reinforce its objective for pure, high-definition audio, Digidesign makes its foray into the loud-speaker market with the Digidesign® Reference Monitor Series (RMS), offering two professional near-field monitors—the RM1™ and RM2™—co-developed with PMC, the Professional Monitor Company. The RM1 and RM2 unite Digidesign's deep expertise in digital audio with PMC's legacy of fine, handcrafted, cutting-edge design and meticulous manufacturing.

Engineered with PMC—The Professional Monitor Company

Based in the United Kingdom, PMC is a world-leading manufacturer of professional monitor and audiophile speaker systems. Its Advanced Transmission Line (ATL™) technology delivers high-resolution, wide-bandwidth signal response and accurate low-frequency response without distortion.

Partnering with PMC was a logical choice for Digidesign as both companies have spent their entire histories developing and advancing pioneering audio technologies that empower audio professionals to create the best-sounding audio possible. Together Digidesign and PMC strive to redefine near-field monitoring by providing the best sounding, incredibly accurate audio reference to help engineers create better mixes that ultimately translate well to any speaker system.

With the Digidesign Reference Monitor Series, Digidesign and PMC have created a monitoring system that delivers total clarity across the frequency spectrum, enabling you to truly hear an impeccably accurate representation of your mix at any stage.

RM1 and RM2: Redefining Near-Field Monitoring

The Digidesign RM1 and RM2 monitoring systems utilize PMC's ATL technology to deliver high-definition audio with unrivalled, accurate bass response. Both systems

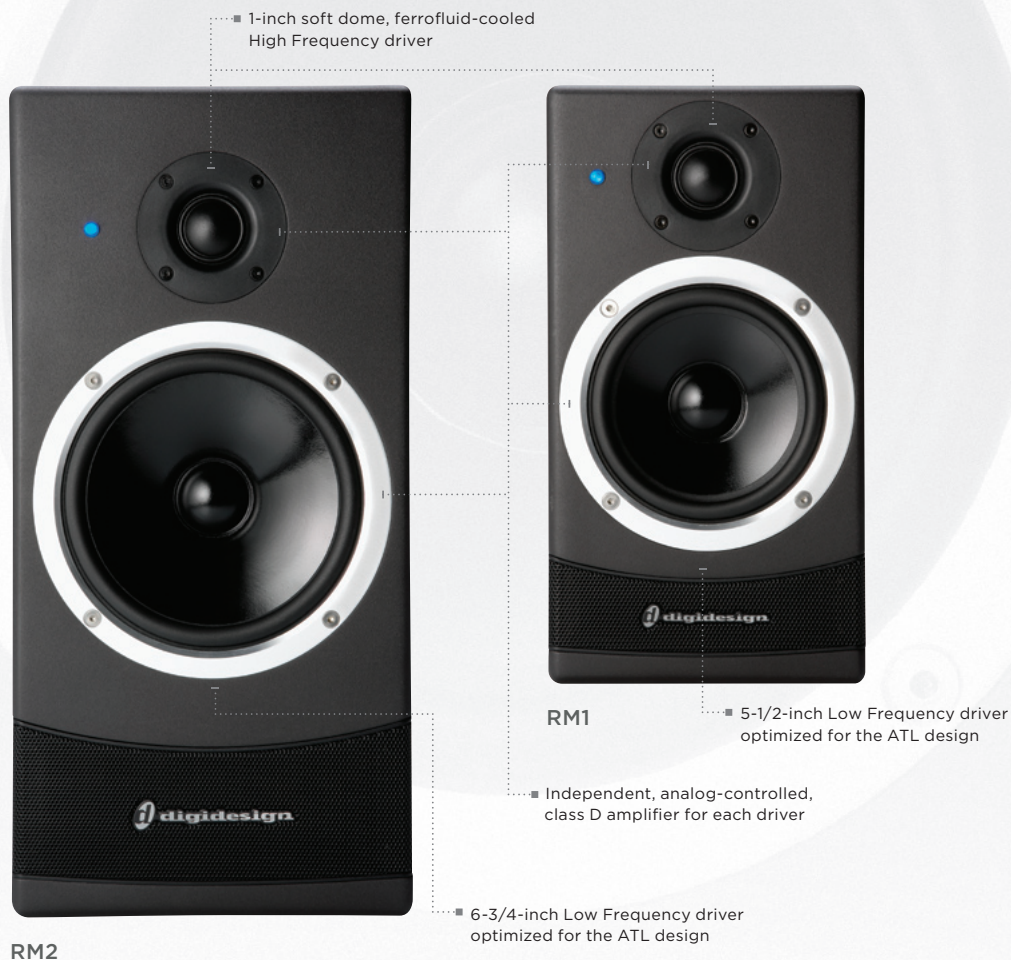
feature a revolutionary, onboard digital signal processing (DSP) engine that manages a variety of tasks, including the complex digital crossover and Bass Port Emulation mode, which emulates the frequency characteristics of a bass reflex speaker, allowing you to hear how your mix "translates" to a ported speaker.

Both monitors are designed with proprietary drivers, digital electronics, power amp, and cabinet engineering to provide unrivalled tonal accuracy, exceptionally low distortion, stunning clarity, and incredible dynamic range. And their wide sound dispersion ensures accurate frequency response even if you're listening in an off-axis position.

The compact RM1 boasts performance comparable to much larger monitors, and is the ideal monitoring system for project studios, editing suites, home studios, and mobile production vehicles. The larger RM2 features a relatively small footprint compared to the competition, but is big on power and sound quality, making it ideal for recording studios, mixing suites, post production facilities, broadcast installations, and other rooms that require a higher sound pressure level (SPL) and even lower bass extension.

Advanced Transmission Line (ATL) Technology

PMC's ATL technology has taken loudspeaker design to new levels, combining sophisticated cabinet engineering, proprietary drive unit



and crossover components, and patented absorption materials to deliver enormous benefits over sealed and ported speaker model designs. It's what enables Digidesign RMS monitors to deliver improved audio resolution with a higher sound pressure level, reduced distortion, even frequency response, and deeper, more defined bass frequencies.

Because of ATL technology, the RM1 and RM2 monitors can produce higher volumes and lower bass extension than other speaker designs of similar sizes—even if identical or larger drivers are used. The frequency response also remains consistent regardless of how high or low you adjust the volume. That means you don't need to crank the volume to achieve maximum bass response.

Onboard DSP Engine

Both monitors feature a 48-bit, fixed-point DSP engine that manages various tasks, including the monitors' complex frequency crossover, speaker positioning EQ settings, trim level, and Bass Port Emulation setting.

The two-way, DSP-based digital crossover features revolutionary steep and pure filter designs for the cleanest crossover—with virtually zero phase shift—so that the signal delivered to the drivers is distortion- and interference-free. The crossover also allows for precision optimization for the best

possible match between the two drivers' responses and their roll-off rates. This provides seamless integration between the High Frequency and Low Frequency drivers, and superb phase response over a wider listening window.

Bass Port Emulation

RM1 and RM2 feature a Bass Port Emulation mode that enables the monitors to emulate the tonal characteristics of ported bass reflex speakers. This allows you to switch from hearing your mix as it truly sounds to hearing how it would sound on typical ported speakers, enabling you to compensate for the coloration characteristics of these types of speakers in your mix.

When switched to the On position, the DSP manipulates the frequency response to mimic the exaggerated bass response of a ported speaker. When switched Off, the bass response is accurate and free from coloration.

Analog-Controlled, Class D Power Amplifiers

RM1 and RM2 both feature analog-controlled Class D amplifiers that combine all of the efficiency and size advantages of digital amplifiers with the precision, control, and sound quality of audiophile linear amplifiers. The power amplifier section within each speaker is 92% efficient in comparison with a linear Class A amplifier, which generally has

around a 50% efficiency. This means that with Digidesign RMS monitors, more of the power from the mains is used to power the drivers rather than produce superfluous heat—and they're cheaper and greener to run than a standard Class A- or B-style amplifier.

While typical Class D amplifier designs have a load-dependant frequency response, the amplifiers in Digidesign RMS monitors feature a single feedback loop, which senses the loudspeaker voltage directly. This provides extremely accurate amplifier frequency response regardless of the reactive load presented by the drivers, enabling the monitors to deliver higher fidelity with lower distortion. And because of their unique analog control, the monitors produce a flatter frequency response no matter what the load of the driver.

High-Quality Linear Power Supply

Digidesign RMS monitors employ a high-quality, linear power supply (instead of a noisy switch-mode design), which provides two times the peak current headroom and the best noise isolation between the audio circuitry and mains supply. Typical switch-mode power supplies are prone to producing noise and radio frequency interference (RFI), which will not only have a detrimental effect on the amplifier, but also on other sensitive equipment connected to the same power supply or in close proximity.

Digidesign RMS Specifications



General	RM1	RM2
Frequency Response	50 Hz - 25 kHz	40 Hz - 25 kHz
Peak SPL at 1 meter	111 dB	113 dB
Effective Line Length	4.9 feet (1.5 meters)	
Drive Units: Low Frequency	5.5-inch (140 mm) doped cone with cast alloy chassis	6.7-inch (170 mm) doped cone with cast alloy chassis
Drive Units: High Frequency	1-inch (27 mm) fabric soft dome with ferrofluid cooling	
Crossover Frequency	3 kHz	
HF Adjustment	-4 dB to +3 dB in 0.5 dB steps; corner frequency 1 kHz	
LF Adjustment	-4 dB to +3 dB in 0.5 dB steps; corner frequency 750 Hz	4 dB to +3 dB in 0.5 dB steps; corner frequency 500 Hz

Input Connectors

Analog	XLR Female—PIN 1 GND, PIN 2 +, PIN 3 -
Digital (AES/EBU)	XLR Female—PIN 1 GND, PIN 2 +, PIN 3 -
Input Impedance	22k Ohm

Sensitivity

Input Level for Full-Scale Output	Adjustable from +4 dBu to +19 dBu
Gain Trim	Nominal gain setting from 0 dB to -15 dB in 1 dB steps

Analog to Digital Specifications

Maximum Input Level	20.9 dBu
Signal to Noise Ratio	111 dB A-weighted
THN + Noise	-95 dB
Conversion Rate	24-bit/96 kHz

Digital to Analog Specifications

Output Voltage	6.37 VRMS
Signal to Noise Ratio	110 dB A-weighted
THD + Noise	-95 dB

Power Amplifier

Output Power	LF: 80 Watts, HF: 50 Watts	LF: 100 Watts, HF: 50 Watts
THD + Noise	0.05%	
Signal to Noise Ratio	125 dB	
Frequency Response	DC - 50 kHz	
Efficiency	>92% at full power	

Size/Weight/Finish

Dimensions	H: 11.42 inches (290 mm) W: 6.1 inches (155 mm) D: 11.81 inches (300 mm)	H: 15.75 inches (400 mm) W: 7.64 inches (194 mm) D: 14.57 inches (370 mm)
Weight	14 lbs (6.4 kg) per unit	20 lbs (9 kg) per unit
Finish	Dark gray texture—RAL 9004	



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